

In the Claims:

1. (Currently Amended) A method of fabricating a high dielectric constant (high-k) capacitor structure, said method comprising:

depositing an adhesion layer in physical contact with a SiO₂ substrate, said adhesion layer being selected from the group consisting of at least one of Si, Al, ~~Al plus TiN~~, and IrO₂; and

depositing a noble metal bottom electrode in physical contact with said adhesion layer.
2. (Original) The method of claim 1 further comprising:

depositing a high-k dielectric material on said bottom electrode;

depositing a top electrode on said high-k dielectric layer;

patterning said top electrode and said high-k dielectric layer;

depositing an insulation layer thereon;

opening vias to said top electrode in the insulation layer;

depositing a metal pad layer in said vias and atop said insulation layer; and

patterning the metal pad layer.
3. (Original) The method recited in claim 1 wherein said bottom electrode is Pt.
4. (Original) The method recited in claim 2 wherein said top electrode is Pt.
5. (Original) The method recited in claim 2 wherein said insulation layer is SiO₂.
6. (Original) The method recited in claim 2 wherein said metal pad layer is Al or W.

7-15. (Canceled)

16. (Previously Presented) The method of Claim 1, wherein the step of depositing an adhesion layer on the SiO_2 substrate comprises depositing a conductive layer.

17. (Previously Presented) The method of Claim 17, wherein the step of depositing a conductive layer comprises depositing a layer of IrO_2 .

18-20. (Canceled)

21. (Previously Presented) The method of Claim 16, wherein the step of wherein the step of depositing a noble metal bottom electrode comprises depositing Pt.

22. (Currently Amended) A method of fabricating an electrode over a semiconductor substrate, comprising the steps of:

depositing a layer in physical contact with a SiO_2 substrate, said layer being selected from the group consisting of at least one of Si, Al, ~~Al plus TiN~~, and IrO_2 ; and

depositing a noble metal electrode in physical contact with said layer.

23. (Previously Presented) The method of Claim 22, wherein the step of depositing said layer on the SiO_2 substrate comprises depositing a conductive layer.

24. (Previously Presented) The method of Claim 23, wherein the step of depositing a conductive layer comprises depositing a layer of IrO_2 .
25. (Previously Presented) The method of Claim 23, wherein the step of depositing a noble metal electrode comprises the step of depositing Pt.
26. (Previously Presented) The method of Claim 22, wherein the step of depositing a noble metal electrode comprises the step of depositing Pt.
27. (Previously Presented) A method of fabricating a high K dielectric capacitor over a semiconductor substrate, comprising the steps of:
- depositing an IrO_2 layer in physical contact with a SiO_2 substrate;
 - depositing a noble metal bottom electrode on said IrO_2 layer;
 - depositing a high-k dielectric material on said bottom electrode;
 - depositing a top electrode on said high-k dielectric layer;
 - patterning said top electrode and said high-k dielectric layer;
 - depositing an insulation layer thereon;
 - opening vias to said top electrode in the insulation layer;
 - depositing a metal pad layer in said vias and atop said insulation layer; and
 - patterning the metal pad layer;
- wherein the IrO_2 adhesion layer is electrically coupled to the noble metal bottom electrode.

28. (Previously Presented) The method of Claim 27, wherein the step of depositing a noble metal bottom electrode in physical contact with said IrO_2 layer comprises the step of depositing Pt.